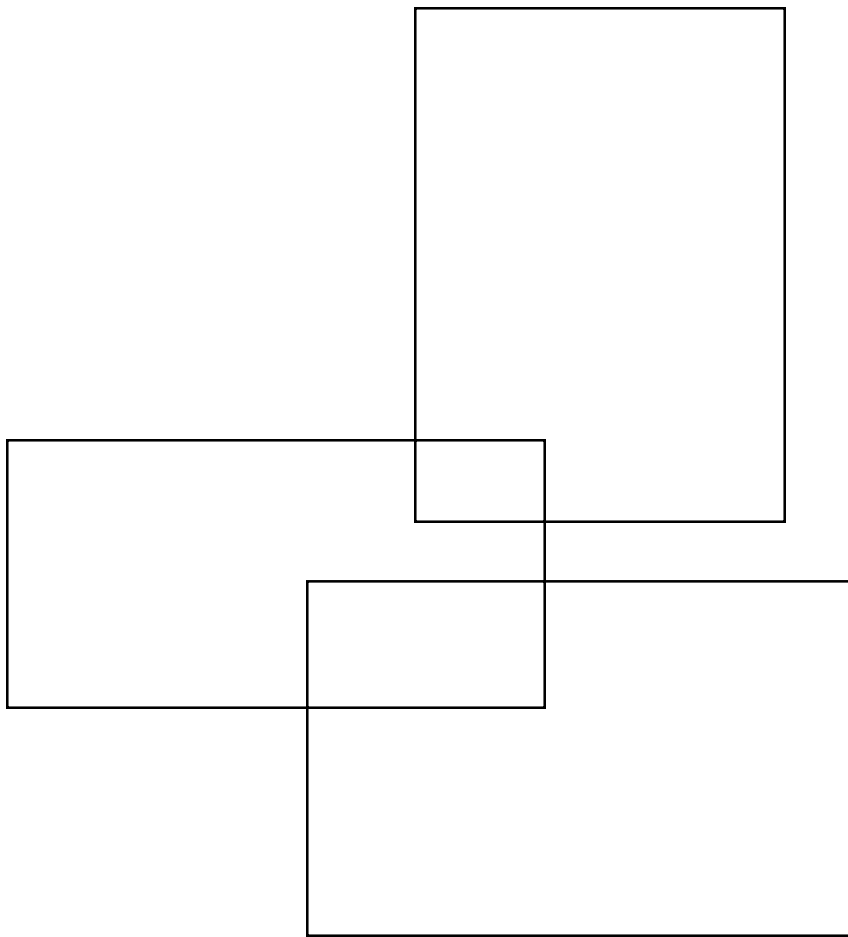


Gum Wrappers

Mathematics Performance Event

Grades 6-8



Southwest Regional MAP Center

Gum Wrappers

Purpose: The purpose of this performance event is to assess a student's ability to use mathematical skills, use a process to solve a complex problem, and to communicate that process in writing.

Show-Me Standards Addressed:

Knowledge: M2

Performance: 3.3, 4.1

Grade Level Range: 6-8

Subject Area: Mathematics

Materials Needed: ruler, gum wrappers, calculators, Student Event Packet (containing the Student Prompt, the Response Sheets #1 and #2, and the Scoring Guide).

Time Needed for Event: 50 minutes

Instructions for Administration: Present students with the Student Prompt and make sure he/she clearly understands what is expected. Go over the scoring guide to ensure the student knows what is meant by quality.

Pre-Assessment Instructions:

Prior to the assessment the students must know how to use a calculator, add, subtract, multiply, and divide. They must also know how to make a chain from gum wrappers. The teacher will demonstrate and give oral directions for making the chain. The students may use gum wrappers, while the teacher uses 8 1/2 in. X 11 in. paper.

1. Hold paper lengthwise, find midpoint of vertical side and fold to half down.
2. Repeat this step.
3. Repeat step once more. Paper has now been folded 3 times.
4. Now fold in half crosswise to create the vertical center.
5. Fold right edge in to vertical crease.
6. Fold left edge in to vertical crease, so both edges meet.
7. Fold on the crease so raw edges are not visible.
8. To form chain, insert folded edges into loops of another "wrapper link".
9. Continue in this manner.

Gum Wrappers: Student Prompt

How many gum wrappers are needed to break the Guinness Book of World Records?

Read the following letter to Heloise from “Hints from Heloise”.

Dear Heloise, Hi! I am writing in to ask you for help. This may sound strange, but can you ask your readers to send me their gum wrappers?

I am making a gumwrapper chain and am trying to get in the “Guinness Book of World Records.” The longest chain in the world is 7,400 feet and I have a long way to go! I only use the outside part, not the foil but the part you take off the foil. Any brand or color will do. So send your gum wrappers to:

*Alison Psiuk
PO Box 601
Carteret, NJ 07008*

I guess you could say, I am recycling them. Thanks a lot. By the way, I use the big multi-packs too!

Alison Psiuk

Your task is to determine how many gum wrappers will be needed to break the record.

1. Show the method you use to find the number of gum wrappers needed to break the record.
2. Write a paragraph explaining how you found your answer.

Gum Wrappers: Response Sheet #1

Show the method you use to find the number of gum wrappers needed to break the record. Do your calculations on this sheet.

Gum Wrappers: Response Sheet #2

Write a paragraph explaining how you found your answer.

[illegible]

Gum Wrappers: Scoring Guide

4: Outstanding

Shows an appropriate method for finding the number of gum wrappers needed to break the record.

There is an explanation that supports the method used and it clearly shows how they arrived at a reasonable answer.

3: Proficient

Shows an appropriate method for finding the number of gum wrappers needed, but is incomplete without an explanation or the explanation is clear but is incomplete without the method shown.

2: Emergent

Part of the task is accomplished, but neither the explanation or the method will accomplish the whole task.

It is apparent that the student requires more instruction.

1: Attempted

It is evident that respondent engaged in the task, but the task was misconceived. For example, a student may have shown a method or used an explanation that would not have ended with the proper results.

0: Off task or no attempt